DRAFT AGENDA

NASA Biodiversity and Ecological Forecasting Team Meeting
April 22 – 23, 2015

Marriott Hotel and Conference
Center College Park, MD
Room: Chesapeake Salon B

Wednesday Afternoon, April 22

1:30PM **Load Talks**

2:00PM **Biodiversity and Ecological Forecasting Program Update**
Woody Turner/NASA ESD

2:15PM **Project Talks (*12 minutes each plus 3 minutes for questions*)**
The Role of Taxonomic, Functional, Genetic, and Landscape Diversity in Food Web Responses to a Changing Environment
Tony Ives/University of Wisconsin

Linking Remotely Sensed Optical Diversity to Genetic, Phylogenetic and Functional Diversity to Predict Ecosystem Processes
Jeannine Cavender-Bares/University of Minnesota

Mapping of Stress on Native Tree Species across Western United States and Canada
Amanda Mathys/University of British Columbia

The Biogeography and Evolution of Drought Tolerance in Grasses
Joseph Craine/Kansas State University

3:15PM **Additional Questions and Discussion**

3:30PM **Project Talks (*12 minutes each plus 3 minutes for questions*)**
Bayesian Data-Model Synthesis for Biological Conservation and Management in Antarctica
Heather Lynch/Stony Brook University

Satellite Driven Studies of Climate-mediated Changes in Antarctic Food Webs
Matt Oliver/University of Delaware

4:00PM **Break**

4:15PM **Project Talks (*12 minutes each plus 3 minutes for questions*)**

Forecasting Changes in Habitat Use by Bowhead Whales in Response to Arctic Climate Change
Eli Holmes/NOAA

Climate Change, Sea Ice Loss, and Polar Bears in Greenland
Kristin Laidre/University of Washington

4:45PM **Additional Questions and Discussion**

5:00PM Integrating Global Species Distributions, Remote Sensing Information and Climate Station Data to Assess Recent Biodiversity Response to Climate Change
Walter Jetz/Yale University

Developing and Testing the Dynamic Habitat Index from Terra and Aqua MODIS Data for Biodiversity and Conservation Science
Volker Radeloff/University of Wisconsin

Global Population Dynamics and Climate Change: Comparing Species-level Impacts on Two Contrasting Large Mammals
Mark Hebblewhite/University of Montana

WhaleWatch: A Tool Using Satellite Telemetry and Remotely-sensed Environmental Data to Provide Near Real-time Predictions of Whale Occurrence in the California Current System
Helen Bailey/University of Maryland Center for Environmental Science

6:00PM **Additional Questions and Discussion**

6:15PM **Dinners with Colleagues**

Thursday, April 23

8:15AM **Project Talks (*12 minutes each plus 3 minutes for questions*)**
Genetic Programming for Ocean Microbial Ecology and Biodiversity
John Moisan/NASA Wallops Flight Facility

Merging Satellite and Numerical Model Data in the California Current to Create Continuous Imagery and Forecasts of Harmful Algal Blooms
Clarissa Anderson/University of California, Santa Cruz

EcoCatch: Improving Ecological and Economic Sustainability of Marine Fisheries Using Remotely-sensed Oceanographic Data
Rebecca Lewison/San Diego State University

Snapshot Wisconsin – Bringing Wildlife Management into Focus:

Integrating Camera Traps, Remote Sensing and Citizen Science to Improve Population Modeling
Phil Townsend/University of Wisconsin

9:15AM **Additional Questions and Discussion**

9:30AM **Project Talks (*12 minutes each plus 3 minutes for questions*)**
Assembly and Evolution of the Amazonian Biota and its Environment: An Integrated Approach
Joel Cracraft/American Museum of Natural History

A Multidisciplinary Framework for Biodiversity Prediction in the Brazilian Atlantic Forest Hotspot
Ana Carnaval/CUNY City College

10:00AM **Break**

10:15AM **Project Talks (*12 minutes each plus 3 minutes for questions*)**
Combining Remote Sensing and Biological Data to Predict the Consequences of Climate Change on Hummingbird Diversity
Catherine Graham/ SUNY Stony Brook

Desert Birds in a Warming World: Characterizing Thermal Stress with Daily Earth Observation Data in Complex Terrain
Thomas Albright/University of Nevada, Reno

10:45AM **Additional Questions and Discussion**

11:00AM **Plenary Discussion Session**
Topic: Based on your NASA-funded activities, please suggest components for integrated global-to-local biodiversity observation and monitoring networks to support large connected landscapes and seascapes for preserving and enhancing Nature

12:00PM **Lunch**

1:15PM **Project Talks (*12 minutes each plus 3 minutes for questions*)**
The Salmonid Population Viability Project: A System to Forecast the Demographic and Genetic Viability of Salmonid Fish across Broad Regions under Changing Climates
Seth Wenger/University of Georgia/Trout Unlimited

Projecting Effects of Climate Change on Pacific Rim Rivers and Salmon: Integrating Remote Sensing, Landscape Genomics, and Demography to Inform Conservation
Gordon Luikart/University of Montana

System for Mapping and Predicting Species of Concern (SMAP-SOC)
John Olson/Desert Research Institute

From the Watershed to the Ocean: Using NASA Data and Models to Understand and Predict Variations in Central California Salmon
Eric Danner/NOAA

2:15PM **Additional Questions and Discussion**

2:30PM **Project Talks (*12 minutes each plus 3 minutes for questions*)**

Management and Conservation of Highly Migratory Fish in the Gulf of Mexico under IPCC Climate Change Scenarios
Mitch Roffer/Roffer's Ocean Fishing Forecasting Service, Inc.

Physiological Impacts of Climate Change Using Remote Sensing
David Wethey/University of South Carolina

3:00PM **Additional Questions and Discussion**

3:15PM **Break**

3:30PM **Project Talks (*12 minutes each plus 3 minutes for questions*)**
Avian Abundance Estimation across the Pacific Flyway for Full Life-cycle Conservation Planning
Steve Kelling/Cornell Lab of Ornithology

Effects of Extreme Climate Events on Avian Demographics
Pat Heglund/U.S. Fish and Wildlife Service

Spatial Responses to Climate across Trophic Levels: Monitoring and Modeling Plants, Prey, and Predators in the Intermountain Western U.S.
Tom Edwards/U.S. Geological Survey/Utah State University

Using NASA Resources to Inform Climate and Land Use Adaptation
Andrew Hansen/Montana State University

4:30PM **Additional Questions and Discussion**

4:45PM **Project Talks (*12 minutes each plus 3 minutes for questions*)**
Sensitivity of Coastal Zone Ecosystems to Climate Change
Candy Feller/Smithsonian Institution

Using the USGS "Resource for Advanced Modeling" to Connect Climate Drivers to Biological Responses

Jeff Morisette/U.S. Geological Survey

Monitoring and Forecasting Chimpanzee Habitat Health in Africa to Inform Conservation Actions, Strategies and Measure Success
Lilian Pintea/Jane Goodall Institute

5:30PM **Additional Questions and Discussion**

5:45PM Pr**ogrammatic Issues: Questions and Answers**
Woody Turner/NASA

6:00PM **Meeting Ends**